

**METAL OXIDE SEMICONDUCTOR HETEROSTRUCTURE FIELD
EFFECT TRANSISTOR**

ABSTRACT OF THE DISCLOSURE

5 A method and structure for producing nitride based heterostructure
devices having substantially lower reverse leakage currents and performance
characteristics comparable to other conventional devices. The method and
structure include placing one or more layers of nitride-based compounds over a
substrate. Additionally, a dielectric layer including silicon dioxide is placed over
10 the nitride-based layers.